# MODIS sensor Working Group (MsWG) Meeting Summary

Mar. 4, 2009

**Attendance:** Gary Toller, Bill Barnes, Aisheng Wu, Junqiang Sun, Gerhard Meister, Gene Eplee, Ben

Ripman, Hongda Chen, Chris Moeller, Brian Wenny, Jack Xiong, Kurt Thome, James

Kuyper, Eric Vermote

## Scheduled Agenda

### Item 1: Recent L1B LUT delivery

- Terra forward update -5.0.40.18 (02/24/09) - m1, RVS

- Aqua forward update -5.0.35.10 (02/20/09) - m1, RVS, Band 21 b1

## **Item 2: Instrument status**

- Terra and Aqua MODIS are in nominal operations.

- Terra Drag Make-up Maneuver (DMU #55) successfully executed on 2009/057 (Feb 26). Loss of pointing accuracy expected from ~17:39 20:00
- Aqua Inclination Adjustment Maneuver (IAM #16) scheduled for 2009/069 (Mar. 10) from ~14:55-15:16. A second maneuver is scheduled for 2009/071 (Mar. 12). The results of the first IAM will dictate the timing and slew angle required for the second IAM. Simulations have shown that this second IAM will come close to a safety margin for MODIS which would cause the MODIS nadir and SV doors to close automatically. IOT has worked closely with FOT to check the timing and parameters of the IAM and reviewed the safety margins in the commands included for MODIS during an IAM. The latest simulation results indicate that the doors will not close, however that simulation is based on predicted results of the first IAM. In the scenario that the doors close, IOT will issue commands to reopen them at the earliest opportunity (~within 1 orbit).

#### **Item 3: MCST recent activities**

- Update on Aqua cold FPA performance: Due to loss of cooler margin, the CFPA are no longer able to be controlled at the nominal operating temperature (83K) through out an entire orbit. The SMIR is actively controlled and LWIR is passively controlled. Beginning in 2006, the SMIR showed indications of orbital variations in temperature. This behavior has grown over time such that the current situation is that the SMIR maximum temperature difference within an orbit is ~0.1K greater than the minimum (i.e. control point temperature). For the LWIR this difference is greater: ~0.17K. The differences appear to be increasing about 0.05K per year. MCST will continue monitoring, but at this time we do not think it is necessary to implement any corrective action in the near future – such as an changing the FPA control point to 85K or performing an outgas procedure – unless a rapid change in behavior is evident.

#### **Item 4: Around the Table**

- Eric presented an issue regarding Terra band 5 Detector 4 (product order). This detector has been classified on the QA as 'noisy' since launch. Due to this noise the detector can not be used in Land PGE at native resolution (500m). This noisy behavior is transferred to the aggregate 1km product which degrades the overall quality. His proposal is that in collection 6, that B5 D4 be flagged as 'Inoperable' in the QA so that it is not included in the aggregate product. MCST felt this would be a change in philosophy as to how we treat noisy/dead detectors and proposed an alternate solution of a L1B code change to not include noisy detectors in aggregate product calculations. This issue requires further discussion before a decision can be reached. MCST will prepare a package on the detector performance throughout the instrument lifetime to investigate this issue.
- Gerhard: Received report from atmosphere group of improvement seen in products after applying the polarization correction LUT.

- Chris: Received and reviewed Aqua prelaunch OOB testing memo. Based on that information it is hard to justify the OOB leak of the size needed to be consistent with his results for Bands 35 presented at the 01/28/2009 MsWG. Investigation is ongoing.

Next Meeting: ~March 18, 2009